

Sustainability in startups/small and medium-sized enterprises: The influential role of entrepreneurial leadership and innovative behavior

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ABSTRACT

Purpose: Entrepreneurial leadership is widely identified as a crucial element for companies to flourish and raise innovation. The capability of management to impact employee attitudes and behaviors toward organizational objectives is vital for the competitiveness, growth, and survival of the organization. **Implications:** There is no existing research on the primary mechanisms through which leaders impact organizational processes. Hence, the current study investigates the role of entrepreneurial leadership and the innovative behavior of the employee in sustainability practices, revealing that entrepreneurial leadership will lessen work uncertainty and promote innovation. **Methodology:** A simple random probabilistic sampling was followed to collect the research data from target respondents using a self-administered structured questionnaire. A total of 100 responses were taken for the final analysis, which was conducted using AMOS and SPSS software. **Findings:** The study's findings revealed that entrepreneurial leadership adopts an inspiring and helpful workplace environment. Moreover, the analysis of the results revealed substantial relationships between entrepreneurial leadership, innovative behavior, and sustainability practices, emphasizing the vital role of leadership and innovation in adopting sustainable organizational practices. **Originality:** The study findings infer that entrepreneurial leadership significantly impacts sustainability practices and the outcomes emphasize the significance of integrating sustainability practices into the fundamental strategies of startups/small and medium-sized enterprises (SMEs). Hence, the policymakers should implement the suggestions to achieve sustainability in their startups/SMEs.

Keywords: Employee attitudes and behaviors, Entrepreneurial leadership and innovative behavior, Sustainability practices

INTRODUCTION

The global landscape is rapidly progressing across numerous sectors, such as products, technology, and economies, with a heightened importance on entrepreneurship as a

driving force for economic development. Entrepreneurial leadership is widely identified as vital for companies to flourish and raise innovation. This approach blends entrepreneurial skills with leadership qualities. It plays a crucial role in driving innovation irrespective of a

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company's scale or structure. Despite its acknowledged effectiveness in navigating complex settings, there remains a lack of research on the influence and efficacy of entrepreneurial leadership. It has developed as a response to the challenges faced by the existing corporate landscape of the 21st century. In a corporate setting, innovation acts as a means for businesses to withstand a competitive edge while improving profitability. Innovation enables adaptability and adopts growth, making stagnation unsafe for businesses. In today's aggressively competitive environment, innovation is vital for survival and attaining both organizational and economic advancement, setting companies apart from their rivals (Leitch and Volery, 2017).

Sustainability has gained increasing significance in evaluating corporate performance metrics, highlighting the imperative to hold inventive approaches to assure continuing viability and ecological well-being. However, the existing research frequently emphasizes external influences while ignoring the particular internal mechanisms that adopt innovative behavior in organizations. The leadership actions of entrepreneurs exert a substantial impact on cultivating an environment conducive to nurturing innovative behavior among staff in small businesses (Edghiem and Mouzoghi, 2018). Managers who foster innovative work behaviors remarkably improve firm performance. Companies that achieve a competitive advantage make value through opportunity identification, cost reduction, and obstacle surmounting. Entrepreneurial leadership associates with a competitive advantage by adopting innovation, thus applying a significant impact on the market positioning and performance of the firm. Although there is a recognized gap in research concerning the mechanisms through which leaders influence organizational processes, particularly in fostering innovation (Al Mamun et al., 2018).

Sustainability poses a critical challenge in startups/small and medium-sized enterprises (SMEs), requiring a nuanced understanding of the prominent roles played by entrepreneurial leadership and innovative behavior. Since these companies navigate the competitive environment, entrepreneurial leaders exert significant impact, piloting organizational strategies toward sustainability objectives through their vision, adaptability, and risk-taking tendencies. Simultaneously, fostering a culture of innovation becomes vital since it facilitates these enterprises to create novel solutions to sustainability problems, adjust to developing market demands, and seize developing opportunities. However, the interaction among entrepreneurial leadership, innovative behavior, and sustainability was not analyzed, emphasizing the need for comprehensive research to explain the mechanisms

through which these factors overlap and drive long-term viability and success (Guberina et al., 2023).

Sustainability is significant for startups/SMEs because of its multifaceted impact on market positioning, organizational endurance, and societal contribution. Entrepreneurial leadership and innovative behavior are vital for fostering sustainability in these firms. Entrepreneurial leaders along with their visionary point of view, like risk-taking tendency, and capability to adjust to changing circumstances, direct their ventures toward sustainable practices and long-term achievement (Palalic, 2017). Innovative behavior among staff is driven by a culture of continuous improvement and creativity refined by entrepreneurial leaders, facilitates startups/SMEs to create novel solutions to environmental challenges, and improves resource utilization and operational efficiency. By incorporating sustainability into their core strategies and operations, directed by entrepreneurial leadership and enabled by innovative behavior, startups/SMEs can mitigate risks related to environmental and social disruptions and capitalize on emerging market opportunities. Resilient business models are built and stakeholder trust is earned to secure a competitive advantage for sustainable development on both local and global scales.

The aim of this study is to examine the relationship between entrepreneurial leadership, innovative behavior, and sustainability practices within startups and SMEs. The major contributions of the study are (i) to measure the perceived impact of entrepreneurial leadership on sustainability practices in startups/SMEs, (ii) to determine the degree to which innovative behavior contributes to the long-term sustainability of startups/SMEs, (iii) to assess the significance of integrating sustainability practices into the core approaches of startups/SMEs for long-term success, and (iv) to deliver recommendations for improving the integration of entrepreneurial leadership and innovative behavior to improve sustainability practices within startups and SMEs.

Local governments may find this research helpful while developing policies for regional economic growth that will strengthen the manufacturing industry by boosting innovation and creating sustainable businesses. Section 2 discusses the literature review, section 3 discusses the methods used, section 4 discusses the analysis of the results, and finally, chapter 5 concludes the study.

LITERATURE REVIEW

Entrepreneurship includes individuals, groups, and organizations actively looking for novel economic

opportunities. Since entrepreneurs venture into uncharted territories, leaders should proficiently navigate challenges and embrace innovations to ensure the achievement of their firms. Fernald et al. (2005) highlighted the pivotal role of entrepreneurial leadership in improving enterprises' competitiveness in dynamic environments. Given the fast change in today's business setting, there is a growing imperative for new methods to cultivate requisite skills among managers, facilitating them to rapidly respond to ongoing shifts. Remarkably, the demand for entrepreneurial leadership intensifies daily as businesses endeavor to adjust promptly to the ever-changing global economy. It is remarkable that entrepreneurial leadership includes a combination of different personality behaviors rather than a singular attribute, including qualities such as imagination, foresight, strategic thinking, and collaboration. Leitch and Harrison (2018) exposed a positive correlation among innovation, entrepreneurial leadership, and business performance. Entrepreneurial leadership is defined variously as a leadership style adopting visionary situations and activating the participants for strategic value creation acts as a framework for inspecting the role of leadership in entrepreneurial contexts. They highlighted the pivotal role of entrepreneurship in driving economic development, consistently solving the main themes of innovation, opportunity recognition, and risk-taking (Röschke, 2018). These attributes are aligned with conventional conceptions of entrepreneurs as risk-takers, creators, and arbiters of economic equilibrium, integrally positioning them as leaders. Leadership and entrepreneurship have appeared as protruding research domains, with the latest studies integrating leaders into entrepreneurship through entrepreneurial leadership. Despite the growing body of literature on entrepreneurial leadership from empirical and conceptual viewpoints, there remains restricted agreement on its definition and attributes (Lyons et al., 2020). As per Harrison et al. (2016), this diversity leads to a disparate literature base, emphasizing a distinct research gap in conceptually and empirically comprehending entrepreneurial leadership. Entrepreneurship is often cited as a main driver of economic development (Seth, 2023).

Entrepreneurial leadership is theoretically delineated into three dimensions. First, innovation promotes team creativity and the formation of novel products and services. Second, proactiveness includes involving people in continual competition with other companies. Third, risk-taking involves confronting ambiguity and supposing responsibility. Entrepreneurial leadership seems to correlate with firm development since it adopts competitive advantage and confirms sustainability. Although there has been limited examination of the association between

entrepreneurial leadership and the business model, it clearly necessitates further exploration. As per Palalic (2017), entrepreneurial leadership helps firms in development and existence, encouraging entrepreneurial leaders to align their teams to seek opportunities proactively, take intended risks, and raise a culture of creativity and variation to drive innovation and effectiveness. Companies targeting long-term success in flexible business environments require these traits entrenched in entrepreneurial leadership (Fontana and Musa, 2017). Extensive research has been performed on entrepreneurs and leaders in recognized companies (Zhou et al., 2018). Entrepreneurs use methods including the assessment of employees' potential and skills to create an environment conducive to improving individual self-efficacy, encouraging the generation of new ideas, and inspiring employees to act on them (Zhixia et al., 2018). Entrepreneurial leadership involves autonomously motivating by yielding autonomy and fostering a supportive climate conducive to employees' innovative behavior. Huang et al. (2017) examined the influence of entrepreneurial leadership on organizational creativity. Entrepreneurial leaders show higher self-confidence, a greater readiness to take risks, and a tendency for experimentation. They motivate team innovation by modeling innovation and enlightening a creative work environment (Maczulskij and Viinikainen, 2023). Empirical studies reliably show a robust association between entrepreneurial leadership and innovation. Utoyo et al. (2020) exposed that strong entrepreneurial potentials can suggest positive emotions such as courage and enthusiasm among followers, causing the generation of innovative solutions in the workplace and impacting the association between innovation performance and entrepreneurial leadership.

Malibari and Bajaba (2022) showed a comprehensive study that brought to light a remarkable finding that there is a considerable correlation between entrepreneurial leadership and the innovative behavior shown by employees. This relationship is remarkably shaped by two key factors, including the occurrence of an innovation-friendly environment and the intellectual suppleness of employees. Despite this significant discovery, additional research is necessary to thoroughly investigate the fundamental mechanisms that influence both entrepreneurial leadership and innovative behavior. Entrepreneurial leadership exemplifies a strategic method that goes beyond simple management. It involves arranging and motivating the intricate operational systems and personnel in the organizations to support fundamental principles such as embracing risk-taking, grabbing opportunities, fostering innovation, establishing competitive advantages, and improving the skills of entrepreneurs in the organization.

This multifaceted method interconnects entrepreneurship and leadership, acting as a managing force that motivates and empowers employees to follow visionary objectives and drive organizational development. It is vital to acknowledge that the values and perspectives apprehended by the leadership team play an essential role in modeling the overall strategy and performance of the company. These principles act as a scope, impacting decision-making procedures, organizational culture, and the company's trajectory. Intrinsically, the alignment of leadership values with organizational objectives becomes vital in driving sustainable success and nurturing innovation and excellence (Li et al., 2020).

Empirical outcomes from numerous studies highlight the significance of entrepreneurial leadership in driving considerable outcomes in entrepreneurial ventures. Adjusting leadership approaches to the dynamic corporate setting becomes imperative, as shown by many studies emphasizing the robust correlation between entrepreneurial success and the capacity of a leader to motivate followers toward fostering creative and innovative thinking and behavior. The advancement of an environment conducive to innovation that adopts receptivity to new ideas and boosts employees to actively look them out finds support in studies by Li et al. (2020), which revealed a subsequent increase in innovative behavior. There is a growing acknowledgment of the essential role that involving employees in creative endeavors plays in enlightening a culture of continuous innovation, as demonstrated by recent studies by Akbari et al. (2021) and Bagheri and Harrison (2020). While previous research has mainly concentrated on transformational leadership (Amankwaa et al., 2019), there has been a rush in exploring alternative leadership styles such as ethical, authentic, and entrepreneurial leadership (Wang et al., 2019). These studies highlight the significance of leaders helping their subordinates in recognizing and grabbing entrepreneurial opportunities, a factor vital for gaining a competitive advantage and driving overall organizational success, particularly within dynamic work environments.

RESEARCH METHODS

Data Collection

The researchers gathered primary data by administering structured questionnaires to chosen participants, including individuals who are students, self-employed, unemployed, retired, and others, as they directly impact the decisions related to organizational expansion. Individuals belonging

to all age groups and having different educational qualifications are considered. Individuals from different geographic locations are also included. Using questionnaires offered several advantages, including the capability to reach a different demographic efficiently, cost-effectiveness, realism, and the simplicity of quantifying gained data promptly and directly. Moreover, the manufacturing sector considerably contributes to gross domestic product, offering a considerable number of jobs. Then, an email elucidating the data collection procedure was sent to the participants with updated information in the database, resulting in a response rate of 10%. This low participation rate may be recognized as a confidentiality concern, as suggested by the preceding studies such as Iqbal et al. (2022) and Shujahat et al. (2018). The sample was collected through simple random probabilistic sampling, confirming each individual had an equivalent chance of participation. The valid questionnaires were obtained, excluding incomplete questionnaires to save data integrity. This sample size is believed to be sufficient for performing analyses and testing research hypotheses, aligning with references from appropriate literature.

Measures

The scale of Renko et al. (2015) called the Entrepreneurial Leadership (ENTRELEAD) Scale is used for measuring the entrepreneurial leadership variable. As per the authors, it reveals the insights of the entrepreneurial leadership features of the leaders of the firm. The questionnaire utilizes a Likert frequency scale from 1 to 5 (1 ["totally disagree"], 2 ["disagree"], 3 ["neither agree nor disagree"], 4 ["agree"], and 5 ["totally agree"]). Entrepreneurial leadership was evaluated using eight items with Cronbach's α , equal to 0.863. To measure innovative work behavior, Janssen's (2000) scale is used. Innovative behavior was measured by a 10-item scale with Cronbach's (α) equal to 0.926. Besides the scales used for the questionnaire, the data corresponding to the description of the sample such as sociodemographic control variables (gender, age, and educational level) are included.

Initially, the questionnaire have demographic information, including categories such as gender, age, educational qualification, employment status, experience in the entrepreneurial sector, and geographic position. Participants are offered options to choose their relevant demographics, ensuring a wide-ranging understanding of the sample characteristics. The next section of the questionnaire explores the influence of entrepreneurial leadership on sustainability practices in startups/SMEs. Participants give responses related to the impact of entrepreneurial

leadership on sustainability practices and express opinions related to the prioritization of sustainability enterprises in entrepreneurial projects. The next section investigates innovative behavior and its role in the sustainability of startups/SMEs. Participants assess the impact of innovative behavior on long-term sustainability and share views on the association between sustainability achievement and innovation culture. Moreover, the impact of innovative solutions on environmental and social sustainability is assessed. The final section concentrates on the significance of incorporating sustainability practices into core business strategies. Participants show opinions on the importance of sustainability incorporation for long-term success, its capability to improve competitive advantage, and its contribution to economic performance. They also recommend strategies to improve the integration of entrepreneurial leadership and innovative behavior to promote sustainability practices. In addition, participants assess the efficiency of government policies and incentives in boosting sustainability practices among startups/SMEs and recognize barriers obstructing the full integration of sustainability practices into operations (Table 1).

Data Analysis

The data analysis unfolded in three stages, harnessing the skills of noticeable statistical software, including AMOS 26 (Arbuckle, 2019) and SPSS 26 (IBM Corp., 2019). In the initial stage, a comprehensive journey of descriptive and inferential analysis is embraced, targeting to unravel the particulars embedded in the dataset. The second stage investigated the thorough examination of the psychometric properties of measurement scales, a crucial endeavor to create validity grounded in the instrument’s internal structure. To accomplish this, the covariance-based structural equation model (CB-SEM) is embraced, which is a sophisticated analytical framework. Particularly, using the estimation method of maximum likelihood, confirmatory factor analysis is conducted to examine the dimensions of the constructs and their interrelationships. This thorough process endorsed us to collect insights into convergent and discriminant validity, along with assessing the reliability of the measurement scales (Ferrando et al., 2022). In the third stage, CB-SEM is revisited, using it once more to assess the proposed theoretical model. This strategic selection was made over structural equation modeling depending on partial least squares (PLS-SEM) because of the explanatory and confirmatory nature of the study, firmly entrenched in established theory (Hair et al., 2017; Hair et al., 2017). Using CB-SEM, the intricate relationships are posited within the theoretical framework,

Table 1: Questionnaire

Section I: Demographic Questions	Responses
1. Gender	<ul style="list-style-type: none"> • Male • Female • Other • Not prefer to say
2. Age	<ul style="list-style-type: none"> • Under 18 • 18–24 • 25–34 • 35–44 • 45–54 • 55–64 • 65 or above
3. Educational Background	<ul style="list-style-type: none"> • High School • Bachelor’s Degree • Master’s Degree • PhD or Above • Other (please specify)
4. Employment Status	<ul style="list-style-type: none"> • Employed full-time • Employed part-time • Self-employed • Unemployed • Student • Retired
5. Years of Experience in Entrepreneurship/Startup/SME Sector:	<ul style="list-style-type: none"> • <1 year • 1–3 years • 4–6 years • 7–10 years • More than 10 years
6. Geographic Location	<ul style="list-style-type: none"> Urban Suburban Rural
Section II: Impact of entrepreneurial leadership on sustainability practices in startups and SMEs	
7. On a scale of 1–5, with 1 being “Not at all” and 5 being “Significantly,” how much do you believe entrepreneurial leadership influences sustainability practices within startups and SMEs?	<ul style="list-style-type: none"> • Not at all • Slightly • Moderately • Significantly
8. Do you think startups and SMEs led by entrepreneurial leaders are more likely to prioritize sustainability initiatives compared to traditional leadership models?	<ul style="list-style-type: none"> • Yes • No • Not sure
9. In your opinion, how important is the role of entrepreneurial leadership in driving sustainable practices within startups and SMEs?	<ul style="list-style-type: none"> • Not important • Somewhat important • Important • Very important

thus enriching the understanding of the phenomena under investigation.

The results are meticulously crafted reportage in alignment with the reporting standards meticulously defined for non-experimental studies (Appelbaum et al., 2018). This difficult adherence to reporting rules ensures the transparency, clarity, and reproducibility of the findings, thus fostering scholarly discourse and progressing the collective knowledge in our field. Our analytical journey navigated through several stages, each accurately arranged to unravel the complexities ingrained in our dataset and shed light on the intricate relationships suggested within the theoretical framework. Through the cautious application of statistical methodologies and steady commitment to scholarly consistency, the terrain of data analysis is navigated with precision and diligence, culminating in the interpretation of valuable insights poised to improve our understanding of the phenomena under examination.

RESULTS

Table 2 shows the demographics of the participants who are involved in the process.

The population who took part in the survey exhibits an intriguing distribution across a number of categories when broken down demographically. Regarding gender, 83% of respondents identified as male, and 7% of respondents identified as female. Furthermore, 6% of respondents declined to reveal their gender, whereas 4% self-identified as “Other.” In terms of age categories, the largest cohort consisted of participants who were between the ages of 25 and 34 (45%) and 35 and 44 (28%). Respondents’ educational backgrounds ranged widely: 46% had a Master’s degree, 30% had a Bachelor’s degree, and 13% had a PhD or above. With 60% identifying as self-employed, 13% as students, and 17% as unemployed, the employment status data revealed a wide variation. With 29% having 1–3 years of experience, 23% having 4–6 years, and 21% having less than a year of experience, the distribution of years of experience showed a spread over different categories. Geographically, 80% of the sample’s respondents lived in urban areas, with the remaining 12% and 8% residing in suburban and rural areas, respectively.

The Influence of Entrepreneurial Leadership on Sustainability Practices in Startups and SMEs

Table 3 and Figure 1 show the responses to the influence of entrepreneurial leadership on sustainability practices

Table 2: Demographics		
Categories	Frequency	Percent
Gender		
Male	83	83.0
Female	7	7.0
Not prefer to say	6	6.0
Other	4	4.0
Age		
Under 18	3	3.0
18–24	13	13.0
25–34	45	45.0
35–44	28	28.0
45–54	7	7.0
55–64	1	1.0
65 or above	3	3.0
Educational Background		
High School	8	8.0
Bachelor’s Degree	30	30.0
Master’s Degree	46	46.0
Other (please specify)	3	3.0
PhD or above	13	13.0
Employment Status		
Student	13	13.0
Self-employed	60	60.0
Unemployed	17	17.0
Retired	3	3.0
Others	7	7.0
Years of Experience		
<1 year	21	21.0
1–3 years	29	29.0
4–6 years	23	23.0
7–10 years	15	15.0
More than 10 years	7	7.0
No experience	5	5.0
Geographic Location		
Rural	8	8.0
Suburban	12	12.0
Urban	80	80.0

in startups and SMEs. 48% of those surveyed indicated that entrepreneurial leadership had a moderate impact on sustainability practices. After that, 14% of participants indicated a slight influence and 20% acknowledged a significant impact. According to nine percent of respondents,

entrepreneurial leadership either had no influence at all or an excessive impact on sustainability practices.

Prioritizing Sustainability Initiatives: Comparing Entrepreneurial Leadership versus Traditional Leadership in Startups and SMEs

Table 4 and Figure 2 show the responses for the comparison of Entrepreneurial Leadership and Traditional Leadership. About half of the participants, or 49%, confirmed that they prioritize sustainability activities, demonstrating an understanding of the significance of these efforts within their organizational structure. However, 21% explicitly said that they did not prioritize these kinds of projects. Interestingly, 30% of interviewees said that they were unsure, indicating some degree of confusion or haziness

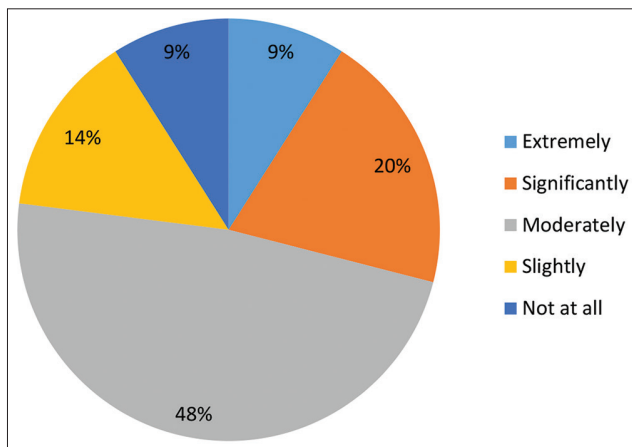


Figure 1: The influence of entrepreneurial leadership on sustainability practices in startups

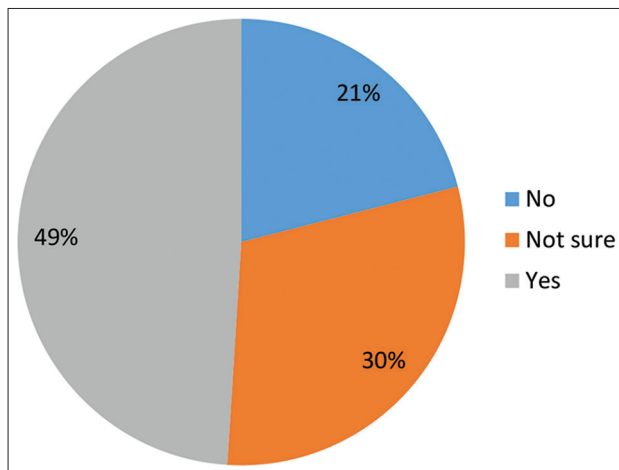


Figure 2: Comparing entrepreneurial leadership versus traditional leadership

around the order in which sustainability initiatives should be prioritized.

The Significance of Entrepreneurial Leadership in Driving Sustainable Practices in Startups and SMEs

Table 5 and Figure 3 show the responses for the significance of entrepreneurial leadership in driving sustainable practices in startups and SMEs. Of those surveyed, 51% stressed the significance of entrepreneurial leadership in this situation. In addition, 17% of participants said that it was extremely significant, demonstrating a strong conviction that entrepreneurial leadership is essential to the advancement of sustainability projects. To further confirm its significance, 25% of respondents thought that it was somewhat important. On the other hand, only 7% of participants thought that entrepreneurial leadership had

Table 3: Influence of entrepreneurial leadership on sustainability practices in startups and SMEs

Categories	Frequency	Percent
Extremely	9	9.0
Significantly	20	20.0
Moderately	48	48.0
Slightly	14	14.0
Not at all	9	9.0
Total	100	100.0

Table 4. Comparing entrepreneurial leadership versus traditional leadership

	Frequency	Percent
No	21	21.0
Not sure	30	30.0
Yes	49	49.0
Total	100	100.0

Table 5: Significance of entrepreneurial leadership in driving sustainable practices

	Frequency	Percent
Important	51	51.0
Not important	7	7.0
Somewhat important	25	25.0
Very important	17	17.0
Total	100	100.0

little significance, indicating that its impact on promoting sustainable behaviors is widely acknowledged.

The Impact of Innovative Behavior on the Long-term Sustainability of Startups and SMEs

Table 6 and Figure 4 show the responses for the impact of innovative behavior on the long-term sustainability of startups and SMEs. The majority of respondents, or 61%, stated that their influence was moderate, which suggests that innovative conduct is crucial to the long-term viability of these businesses. Furthermore, 19% of participants indicated a noteworthy impact, highlighting the role that innovation plays in advancing sustainability initiatives. On the other hand, 15% of participants observed a marginal effect, but a mere 5% said that inventive conduct had no bearing at all on enduring sustainability.

The Relationship Between Innovation Culture and Long-term Sustainability in Startups and SMEs

Table 7 and Figure 5 show the responses for the relationship between innovation culture and long-term sustainability

in startups and SMEs. The majority of participants, or 56%, confirmed that innovation culture and long-term sustainability are positively correlated in these businesses. On the other hand, 16% of participants said that they did not think the two elements were related. Interestingly, 28% of respondents said that they were unsure, suggesting that opinions on the impact of innovation culture on long-term sustainability are divided or unclear.

The Positive Impact of Innovative Solutions on Environmental and Social Sustainability in Startups and SMEs

Figure 6 and Table 8 show the responses to the positive impact of innovative solutions on environmental and social sustainability in startups and SMEs. A sizable majority of respondents – 60% – reported a moderate impact, suggesting that creative solutions are crucial to improving these businesses’ social and environmental sustainability. Furthermore, 11% of participants emphasized a noteworthy effect, highlighting the transformative potential of novel techniques in this context. On the other hand, 21% of participants observed a marginal effect, whereas 8% said that inventive solutions had no bearing whatsoever on social and environmental sustainability.

The Importance of Integrating Sustainability Practices into Core Strategies for Long-term Success in Startups and SMEs

Table 9 and Figure 7 show the responses to the importance of integrating sustainability practices into core strategies for

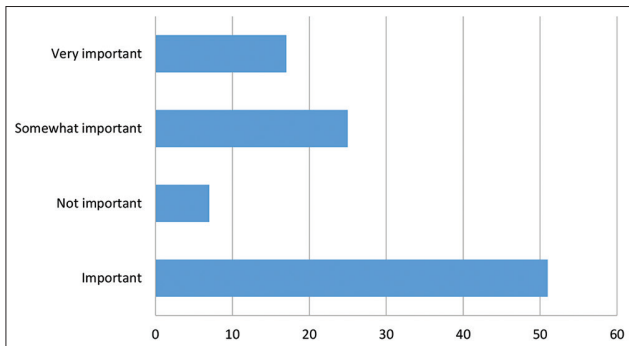


Figure 3: Significance of entrepreneurial leadership in driving sustainable practices

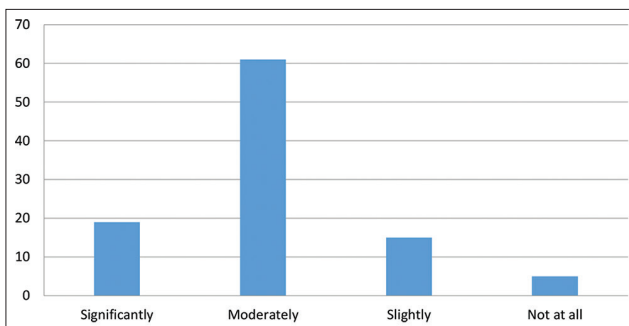


Figure 4: Impact of innovative behavior on the long-term sustainability

Table 6: Impact of innovative behavior on the long-term sustainability

	Frequency	Percent
Significantly	19	19.0
Moderately	61	61.0
Slightly	15	15.0
Not at all	5	5.0
Total	100	100.0

Table 7: Relationship between innovation culture and long-term sustainability

	Frequency	Percent
No	16	16.0
Not sure	28	28.0
Yes	56	56.0
Total	100	100.0

Table 8: Positive impact of innovative solutions on environmental and social sustainability

	Frequency	Percent
Significantly	11	11.0
Moderately	60	60.0
Slightly	21	21.0
Not at all	8	8.0
Total	100	100.0

Table 9: Importance of integrating sustainability practices for long-term success

	Frequency	Percent
Very important	13	13.0
Important	50	50.0
Somewhat important	32	32.0
Not important	5	5.0
Total	100	100.0

long-term success in startups and SMEs. About 50% of the participants highlighted the significance of this integration, emphasizing its critical role in attaining long-term success. Moreover, 32% of respondents said that it was somewhat significant, indicating a high degree of recognition of the applicability of sustainable practices in key strategies. Furthermore, 13% of those surveyed said that it was extremely important, confirming the crucial role sustainability integration plays in guaranteeing long-term viability. On the other hand, a minority opinion was indicated by the mere 5% of those who thought that it was unimportant.

Incorporating Sustainability into Core Business Strategies Enhance the Competitive Advantage of Startups and SMEs

Table 10 and Figure 8 show the responses for incorporating sustainability into core business strategies to enhance the competitive advantage of startups and SMEs. The majority of respondents, or 64%, strongly agreed that incorporating sustainability into key strategy does, in fact, improve these businesses’ competitive edge. This suggests that there is a general consensus regarding the strategic importance of sustainability practices in boosting market competitiveness. On the other hand, just 9% of participants said that they did not think this kind of integration was good for competitive standing. Remarkably, 27% of respondents said they were unsure, indicating a need for more research or explanation on the connection between competitive advantage and sustainable integration.

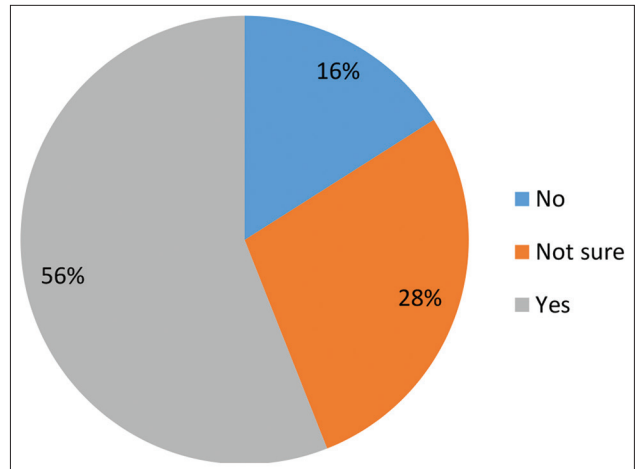


Figure 5: Relationship between innovation culture and long-term sustainability

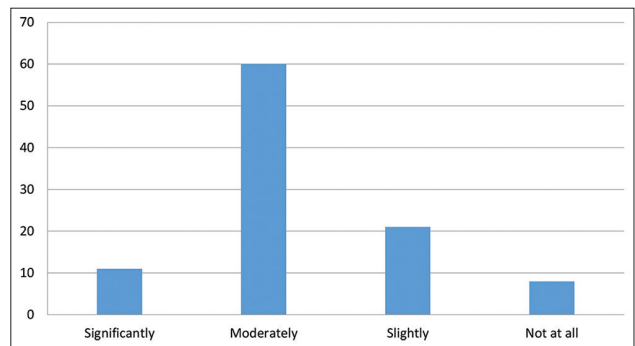


Figure 6: Positive impact of innovative solutions on environmental and social sustainability

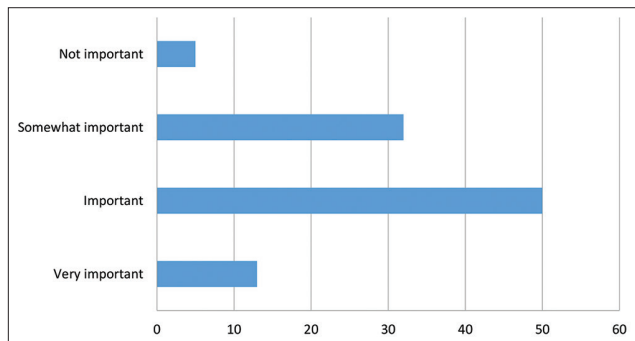


Figure 7: Importance of integrating sustainability practices for long-term success

The Contribution of Sustainability Initiatives to Financial Performance in Startups and SMEs

Table 11 and Figure 9 show the contribution of sustainability initiatives to financial performance in startups and SMEs. 67% of the participants indicated a moderate contribution,

Table 10: Incorporating sustainability into core business strategies

	Frequency	Percent
No	9	9.0
Not sure	27	27.0
Yes	64	64.0
Total	100	100.0

Table 11: Contribution of Sustainability Initiatives to Financial Performance

	Frequency	Percent
Significantly	19	19.0
Moderately	67	67.0
Slightly	8	8.0
Not at all	6	6.0
Total	100	100.0

suggesting that sustainability activities have a noteworthy impact on improving the financial performance of these businesses. Furthermore, 19% of participants emphasized that sustainability efforts have a favorable impact on financial outcomes, which is a considerable contribution. On the other hand, 6% of respondents said that sustainability activities had no effect at all on financial success, whereas 8% thought that they made a minor contribution.

Strategies to Enhance the Integration of Entrepreneurial Leadership and Innovative Behavior to Promote Sustainability Practices within Startups and SMEs

Table 12 and Figure 10 show the responses for the strategies to enhance the integration of entrepreneurial leadership and innovative behavior to promote sustainability practices within startups and SMEs. The vast majority of respondents – 68% – emphasized the value of providing incentives for sustainable practices, realizing the influence that incentives have on inspiring individuals and groups to give sustainability projects top priority. Another popular tactic that stood out was the establishment of clear sustainability goals and metrics, as supported by 48% of participants who felt that this was necessary to effectively direct sustainability activities. Furthermore, training and development programs were cited as a critical tactic by 46% of respondents, highlighting the significance of giving staff members the know-how and abilities to promote sustainable practices. One important strategy

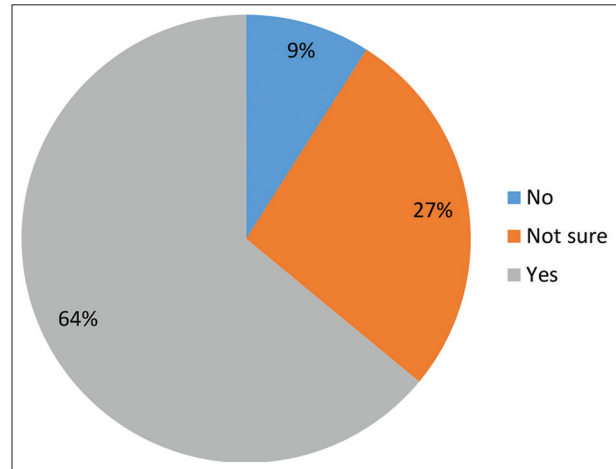


Figure 8: Incorporating sustainability into core business strategies

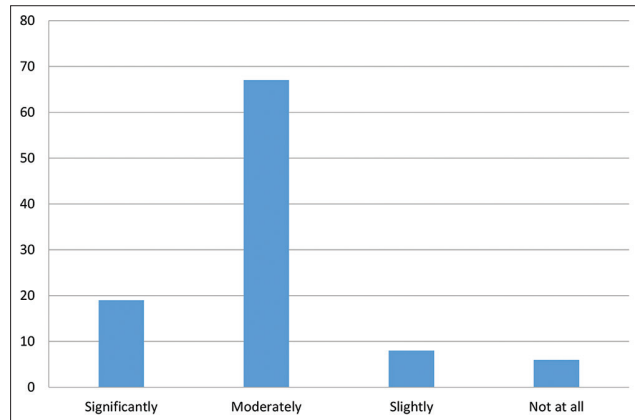


Figure 9: The contribution of sustainability initiatives to financial performance in startups and SMEs

that was mentioned was encouraging cross-functional collaboration. According to 36% of participants, this is a valuable way to harness multiple perspectives and skills to advance sustainability goals. In addition, 13% of respondents offered other strategies outside of those on the list, suggesting the possibility of creative solutions catered to the unique requirements and environments of various SMEs and startups.

Effectiveness of Government Policies and Incentives in Promoting Sustainable Practices among Startups and SMEs

Table 13 and Figure 11 show the responses for the effectiveness of government policies and incentives in promoting sustainable practices among startups and SMEs. The majority of respondents, or 61%, thought that these incentives and

Table 12: Strategies to enhance the integration of entrepreneurial leadership and innovative behavior to promote sustainability practices

	Frequency	Percent
Encouraging cross-functional collaboration	36	36.0
Providing training and development programs	46	46.0
Establishing clear sustainability goals and metrics	48	48.0
Offering incentives for sustainable practices	68	68.0
Others	13	13.0

Table 13: Effectiveness of government policies and incentives in promoting sustainable practices

	Frequency	Percent
Very effective	17	17.0
Moderately effective	61	61.0
Slightly effective	16	16.0
Not effective at all	6	6.0
Total	100	100.0

rules were only somewhat effective, which suggests that they had a big influence on encouraging sustainability measures in these businesses. Furthermore, 17% of participants said that they were extremely effective, underscoring the critical role that government actions play in promoting sustainable practices. On the other hand, 16% of respondents thought that government incentives and policies were only marginally effective, indicating that there is still potential for improvement in terms of their scope or execution. Moreover, 6% of interviewees thought that they were completely ineffective, which represents a minority opinion.

Barriers to Full Integration of Sustainability Practices in Startups and SMEs

Table 14 and Figure 12 show the responses for barriers to full integration of sustainability practices in startups and SMEs. According to 52% of respondents, the most frequently mentioned obstacle is the preference for short-term profits over sustainability. Lack of knowledge or comprehension of sustainability issues was identified by 35% of participants as a major obstacle. Furthermore, 47% of respondents cited regulatory restrictions as a barrier to full integration, suggesting that firms looking to implement sustainable practices may

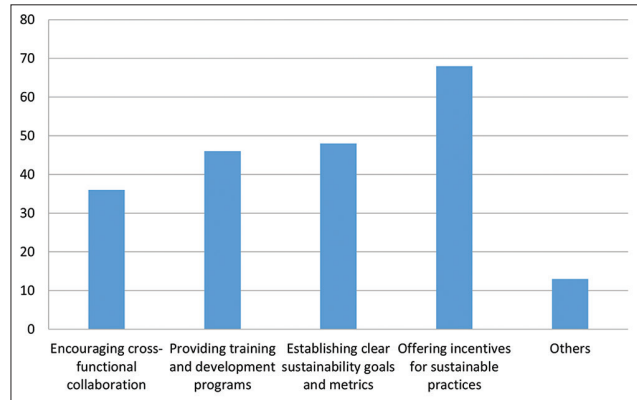


Figure 10: Strategies to enhance the integration of entrepreneurial leadership and innovative behavior to promote sustainability practices

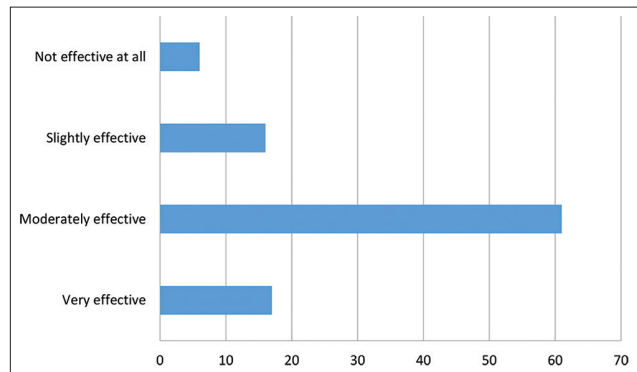


Figure 11: Effectiveness of government policies and incentives in promoting sustainable practices among startups and SMEs

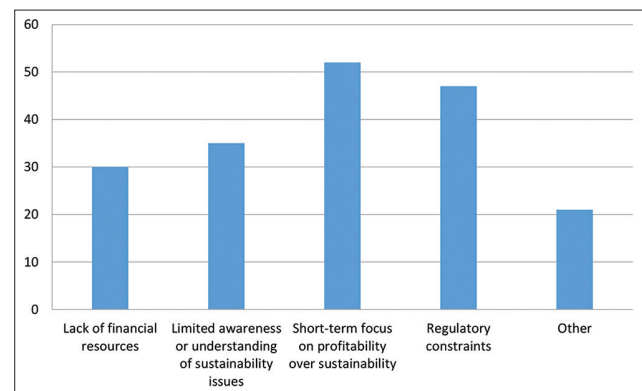


Figure 12: Barriers to full integration of sustainability practices

face difficulties or restrictions as a result of current rules. In addition, 30% of participants identified a lack of funding as a barrier, indicating that limited funding may make it difficult to implement sustainability measures, especially for startups

Table 14: Barriers to full integration of sustainability practices

	Frequency	Percent
Lack of financial resources	30	30
Limited awareness or understanding of sustainability issues	35	35
Short-term focus on profitability over sustainability	52	52
Regulatory constraints	47	47
Other	21	21

and SMEs with little resources. Finally, 21% of respondents mentioned hurdles that were not on the list, indicating a variety of other difficulties that might differ based on the particular settings and conditions of different companies.

CONCLUSION

This study has explored the intricate connection among innovative behavior, entrepreneurial leadership, and sustainability practices in startups and SMEs. Through examination, we have exposed valuable understandings of the essential role played by entrepreneurial leadership and innovative behavior in driving sustainable practices in these organizations. These findings show that entrepreneurial leadership significantly impacts sustainability practices, with respondents confessing its significance in fostering a culture of sustainability. Moreover, innovative behavior developed as a key factor of long-term sustainability, highlighting the critical requirement for fostering an environment that boosts creativity and experimentation. In addition, this study emphasizes the significance of integrating sustainability practices into the fundamental strategies of startups/SMEs, emphasizing its potential to improve competitive advantage and total financial performance. Actionable recommendations are provided for improving the incorporation of entrepreneurial leadership and innovative behavior to promote sustainability practices in startups and SMEs. By implementing these recommendations, organizations can locate themselves for long-term success while concurrently contributing to social and environmental well-being.

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CONFLICTS OF INTEREST

This is to bring to your kind consideration that this research work has no conflicts of interest.

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